**Genes to Proteins Poster Project DUE DATE: 2/5/15**

**Students will use construction paper, markers, and scissors to construct a model of DNA using at least 24 nucleotides. Students will use the model to distinguish between DNA and RNA; to model and explain the processes of replication, transcription, and translation; and to predict (with justification) the effects of change (mutation) on the original nucleotide sequence. This model will be displayed on a poster that includes detailed diagrams and descriptions of how DNA and RNA differ and the processes of DNA replication, transcription, translation. The poster should clearly communicate the steps of how DNA leads to protein coding.**

**\*This assignment may be completed individually or in a small group\***

**Furthermore, your Poster must include the following components:**

* **DNA and RNA model of 24 nucleotides**
* **Thorough explanation of DNA replication, transcription, and translation**
* **Poster should provide an example of how the 24 nucleotides will code for a specific polypeptide**

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|  | **1-4 points** | **5-8 points** | **9-10 points** |
| **Presentation Format** | **Poster and DNA/RNA model was poorly formatted; little thought went into designing the poster** | **Formatting of poster and DNA/RNA model was adequate; some thought went into designing the poster** | **Formatting of poster and DNA/RNA model was exceptional; significant thought went into designing the poster** |
| **DNA and RNA model; Diagrams and visual representations of how genes code for polypeptides** | **DNA and RNA models were poorly done; Diagrams and visual representations of how genes code for polypeptides were poorly done** | **DNA and RNA models were adequate; Diagrams and visual representations of how genes code for polypeptides were adequate** | **DNA and RNA models were well done; Diagrams and visual representations of how genes code for polypeptides were exceptionally done** |
| **Description of DNA replication, transcription, and translation** | **Description of DNA replication, transcription, and translation is done with little detail** | **Description of DNA replication, transcription, and translation is done with moderate detail** | **Description of DNA replication, transcription, and translation is done with great detail** |
| **TOTAL Points possible** |  |  | **30 points total** |

**\*\* A minimum of one outside source must be cited from your research for your poster. The source must be either a .org, .edu, or .gov website. No Wikipedia! You may use Wikipedia as a starting point, but not as a primary resource in your poster. \*\***